

## **Department of the Navy**



### **Environmental Update Well Testing Program**

**Naval Air Warfare Center  
Warminster, Pennsylvania**

**Fact Sheet No. 1  
March 1994**

## **INTRODUCTION**

This is the first in a series of fact sheets to inform the public and community leaders of ongoing and planned environmental activities at the Naval Air Warfare Center (NAWC) in Warminster, Pennsylvania. The primary purpose of this fact sheet is to announce and explain the next round of well testing in the vicinity of the base. The Navy, in cooperation with the U.S. Environmental Protection Agency (EPA), is planning to conduct a third round of well testing in March 1994. This testing is part of additional investigations at the base to determine the full nature and extent of groundwater contamination both on and off current NAWC Warminster property.

Additional studies and public water connections are also briefly discussed in this fact sheet.

## **BACKGROUND**

Previous environmental investigations at NAWC Warminster and in the vicinity of the facility have found groundwater to be contaminated with elevated levels of volatile organic compounds (VOCs), including trichloroethylene (TCE) and tetrachloroethylene (PCE). VOCs are liquids that readily evaporate when exposed to the air. Many VOCs are industrial-grade degreasers that have been used for numerous commercial and household purposes.

Since the late 1970s, both on-base and off-base wells have been affected by elevated VOC levels. It has not been determined if off-base residential groundwater contamination is related to former waste disposal operations at NAWC Warminster.

The Navy, in coordination with EPA, initiated the periodic sampling of off-base wells beginning in April 1993 to assess the impact of contaminated groundwater possibly attributable to the facility.

## **ROUND 1 WELL TESTING**

Initially, the Navy sampled more than 250 residential, commercial, and municipal wells in the vicinity of NAWC Warminster between April and August 1993 (Figure 1). The wells selected for testing were located within two study areas that extend approximately 3,000 to 5,000 feet from the boundaries of waste sites and/or known groundwater contaminated areas at NAWC Warminster. These areas were delineated by the Navy, in consultation with EPA, using available information at that time, regarding the directions and velocities of groundwater flow along with potential influences on groundwater flow (such as the pumping of wells used by municipal water authorities). The areas were delineated in order to help focus the first round of sampling.

During Round 1, VOC levels were found in some wells that exceeded EPA's Maximum Contaminant Levels (MCLs). MCLs are standards promulgated by the Safe Drinking Water Act for municipal water supplies; they are designed for the

protection of human health and reflect technical limits on removing contaminants from water.

At 33 residences where VOC levels in the well water exceeded MCLs, the Navy installed water-treatment systems to remove the VOCs, thereby making the water safe for domestic uses such as drinking, cooking, and bathing. These actions were taken despite the lack of clear evidence that the Navy was responsible for the elevated VOC levels.

## **ROUND 2 WELL TESTING**

The Navy conducted a second round of well testing in October 1993 during which 65 residential and commercial wells were sampled within the study areas. Wells sampled during Round 2 fell into one of the following categories:

- Group 1: Those locations and wells where water-treatment systems were installed as part of Navy response actions.
- Group 2: Those locations and wells located in the vicinity (e.g., within approximately 200 feet) of residences with water-treatment systems installed by the Navy, including wells without any detectable VOC levels during Round 1 testing.

- Group 3: Those locations and wells where VOC levels below the applicable MCLs were detected during Round 1.

Locations in Group 1 were sampled as part of an operation and maintenance program for the water-treatment systems. All wells within Group 2 were sampled, including those with no VOC levels detected during Round 1.

The Navy, with EPA's concurrence, decided not to sample any other wells at those locations where VOC levels were not detected during Round 1 because it appeared unlikely that these wells would be affected by NAWC Warminster and therefore did not need to be sampled during Round 2. In addition, the Round 1 test results indicated that the well sampling program did not need to be expanded beyond the initial study areas.

After the Round 2 test results were evaluated, the Navy installed water-treatment systems at the five residences where VOC levels in the well water exceeded MCLs. At two other locations, the Navy took action to maintain existing water-treatment systems by rotating components of the system. These actions were again taken despite the lack of conclusive information that the Navy was responsible for the VOC levels.

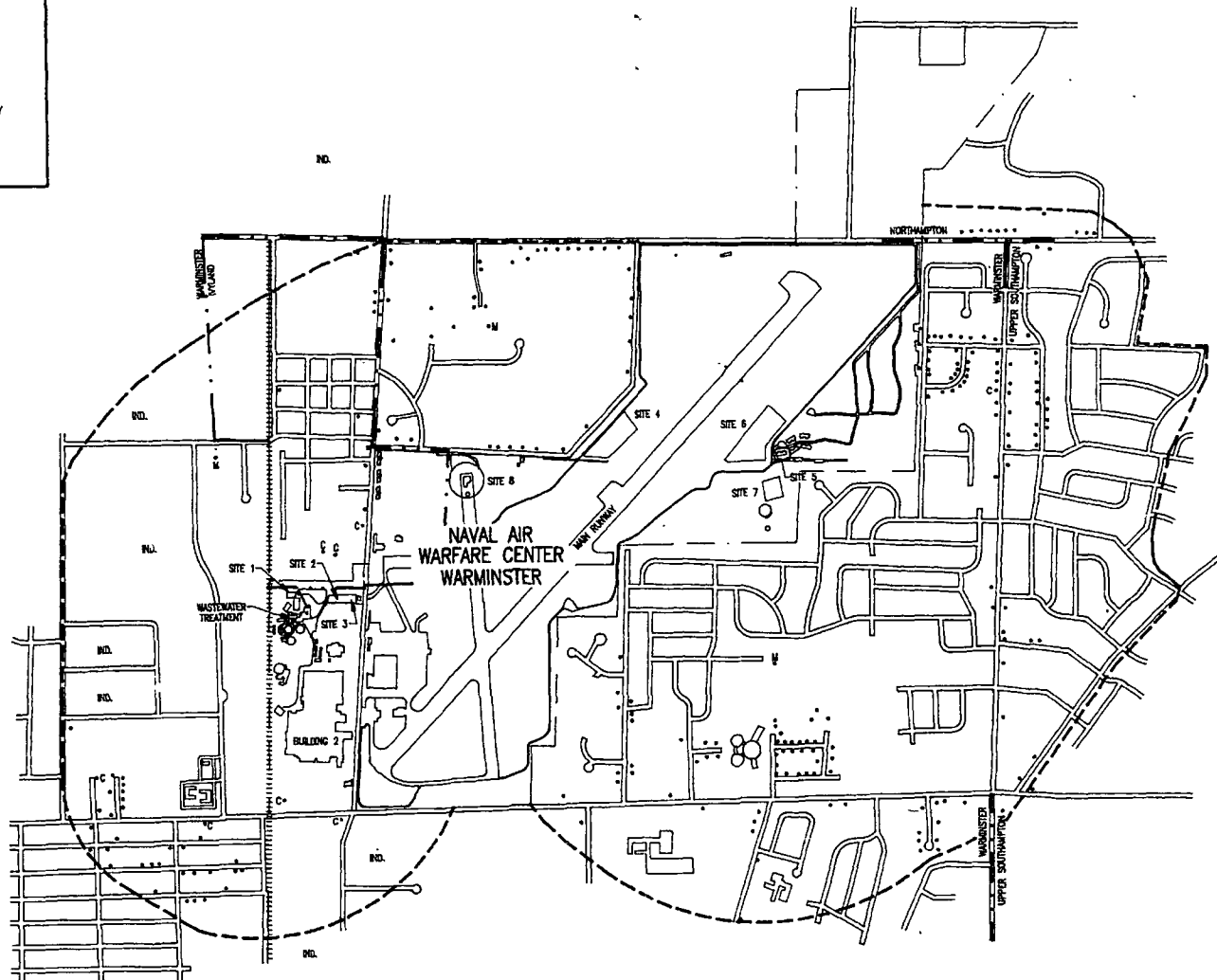
## ROUND 3 WELL TESTING

The third round of well testing is scheduled to begin in March 1994 and is expected to take two months to complete. In general, the criteria used by the Navy and EPA to identify well locations for Round 2 sampling have been used to select well locations for Round 3 sampling, with the following modifications:

- Residences recently connected to municipal water supplies within the study areas will not be sampled.
- All residential wells will be sampled in the Flying Heels neighborhood because it is unclear whether VOC levels in well water in this area are attributable to the Navy or some other source of potential groundwater contamination. The test results of the Round 3 well sampling will be used to help focus any investigations planned by EPA in the vicinity of this neighborhood.
- All commercial, irrigation, industrial, public water supply, recreation, institutional, and other non-residential wells within the study areas will be sampled.

**LEGEND**

- RESIDENTIAL WELL
- M MUNICIPAL WELL
- C COMMERCIAL WELL
- TOWNSHIP BOUNDARY
- - - BASE BOUNDARY
- - - SAMPLING AREA BOUNDARY
- IND. INDUSTRIAL PARK



**FIGURE 1**  
WELL TESTING STUDY AREAS  
NAWC WARMINSTER  
(AS OF MARCH 1994)

Letters will be sent to those residences whose wells will be sampled in the third round. These letters will list the individual(s) that should be contacted to schedule a time and date for sampling. Well samples will again be collected by the Navy's consultant for the testing. Where appropriate, response actions will be carried out by the Navy or EPA to reduce exposure to elevated levels of VOCs in private water supplies.

The Navy and EPA plan to hold small group meetings with residents and community leaders affected by the well testing program or interested in environmental activities at the base. Further information regarding these meetings will be provided in letters to be mailed to affected parties.

## **ADDITIONAL STUDIES**

On September 29, 1993, the Navy and EPA selected a remedy for addressing the cleanup of environmental problems at NAWC Warminster. This is the first clean-up plan for the facility. The objective of the remedy is to minimize the migration of contaminated shallow groundwater attributable to six of the

eight sites identified at the facility. As part of the first remedy, the Navy will extract contaminated shallow groundwater using a series of wells, treat the extracted water at the facility, and discharge the treated water to an unnamed tributary of Little Neshaminy Creek.

The Navy will also perform additional investigations to determine the full nature and extent of contamination attributable to the facility, including investigation of deeper groundwater, soils, surface waters, sediments, and wastes.

In October 1993, the Navy began investigating the extent of groundwater contamination in the vicinity of the southeastern portion of the NAWC Warminster property; other investigations are currently underway or are being planned.

In addition, the clean-up plan calls for the Navy, in cooperation with EPA, to continue to periodically sample wells in the vicinity of NAWC Warminster. The frequency of monitoring, as well as who will be responsible for long-term groundwater testing, will be agreed upon by the Navy, EPA, and other regulatory agencies.

The study areas for well testing by the Navy will be extended in the event that periodic monitoring (or additional information) indicates the potential for elevated levels of hazardous substances attributable to NAWC Warminster at additional off-base well locations.

If additional contamination is found in the vicinity of NAWC Warminster that is not attributable to the facility, or if potential sources of off-base contamination are discovered, EPA will conduct the appropriate investigation to determine the type of contamination present and to assess the relative risks associated with that contamination or source.

## **PUBLIC WATER CONNECTIONS**

The Navy and EPA are connecting residences affected by groundwater contamination in the vicinity of Casey Village and Kirk Road to a public water supply system. Certain residences in the vicinity of Casey Village have already been connected to existing water mains by the Navy.

Prior to connection of most of the remaining residences of concern in Casey Village and Kirk Road, new water mains must be constructed. The U.S. Army Corps of Engineers is arranging for the construction of the majority of these new water mains through an agreement with EPA, and the rest of the new water mains will be constructed independently by the Warminster Township Municipal Authority.

## **POINTS OF CONTACT**

The Navy point of contact for the well testing program and the information presented in this fact sheet is Mr. Joe Cody, of the NAWC Warminster Public Affairs Office. He can be reached at (215) 441-3067. The Navy point of contact for all other environmental activities is Mr. Lonnie Monaco, of the Northern Division, Naval Facilities Engineering Command, at (215) 595-0567, extension 164.

The EPA Region III point of contact for NAWC Warminster environmental activities is Ms. Terri White at (215) 597-6925.

Department of the Navy  
Naval Air Warfare Center  
Aircraft Division Warminster  
P.O. Box 5152  
Warminster, Pennsylvania 18974-0591



unk

041

Ford/Dyer  
1221 Jacksonville Road  
Warminster, Pennsylvania 18974

FORDSEL 189740076 IN DIVISION  
RETURN TO SENDER  
NO FORWARD ORDER ON FILE  
UNABLE TO FORWARD  
RETURN TO SENDER

## FOR FURTHER INFORMATION

If you did not receive this fact sheet in the mail and wish to be placed on the mailing list for future information pertaining to this facility, please fill out, detach, and mail this form to

Joseph P. Cody  
Public Affairs Officer  
Naval Air Warfare Center - Code 041  
Jacksonville Road  
Warminster, Pennsylvania 18974-5000

Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_  
Affiliation \_\_\_\_\_  
Phone (    ) \_\_\_\_\_